

(19) World Intellectual Property
Organization
International Bureau



10 MAR 2005



(43) International Publication Date
1 April 2004 (01.04.2004)

PCT

(10) International Publication Number
WO 2004/027296 A1

(51) International Patent Classification⁷: **F16K 1/30,**
F17C 13/04

William [GB/GB]; 2 The Links, Whitehill, Bordon,
Hampshire GU35 9HB (GB).

(21) International Application Number:
PCT/GB2003/003963

(74) Agent: **WICKHAM, Michael**; The BOC Group plc,
Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).

(22) International Filing Date:
15 September 2003 (15.09.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0221554.9 17 September 2002 (17.09.2002) GB

(71) Applicant (*for all designated States except US*): **THE
BOC GROUP PLC** [GB/GB]; Chertsey Road, Windle-
sham, Surrey GU20 6HJ (GB).

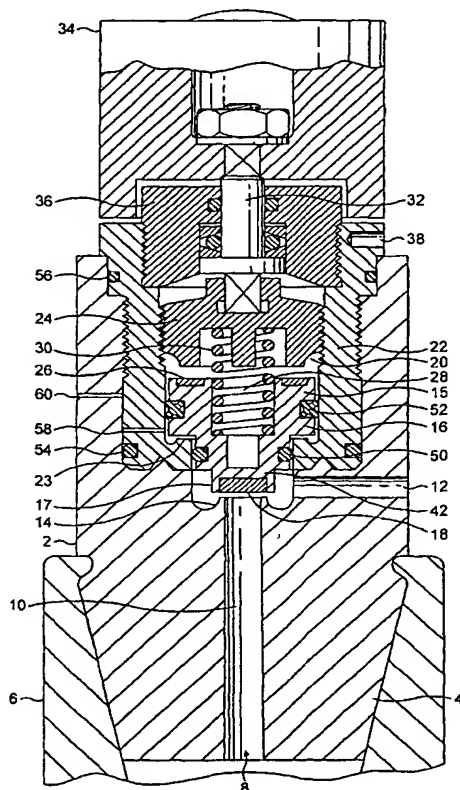
(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **BIRCH, David,**

[Continued on next page]

(54) Title: CYLINDER VALVE



(57) **Abstract:** A cylinder valve includes: a single valve member in the form of a spring (30)-loaded shuttle (16), the spring (30) exerting a pressure on the shuttle (16) in a valve-closing direction; a valve seat (14) against which the valve member bears in its valve-closing position; a guide (22) defining a channel in which the shuttle (16) is able to travel; a stop member (24) able to be translated in the channel into and out of a position in which the stop member (24) holds the valve member in its valve-closing position; and a valve body (2) which is engaged by the guide (22), the guide (22) being able to be translated into a position in which the shuttle (16) cannot be brought to bear against the valve seat (14).

WO 2004/027296 A1



SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*